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APPLICATION NO.	FILING DATE	FIRST NAMED INVENTOR	ATTORNEY DOCKET NO.	CONFIRMATION NO.
10/723,174	11/26/2003	Katrin Kneipp	M0925.70114US01	5755

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EXAMINER	
HINES, JANA A	

ART UNIT	PAPER NUMBER
1645	

DATE MAILED: 08/11/2006

Please find below and/or attached an Office communication concerning this application or proceeding.

Advisory Action Before the Filing of an Appeal Brief	**Application No.** 10/723,174	**Applicant(s)** KNEIPP ET AL.	
	Examiner Ja-Na Hines	**Art Unit** 1645	

--The MAILING DATE of this communication appears on the cover sheet with the correspondence address --

THE REPLY FILED 17 July 2006 FAILS TO PLACE THIS APPLICATION IN CONDITION FOR ALLOWANCE.

1. ☐ The reply was filed after a final rejection, but prior to or on the same day as filing a Notice of Appeal. To avoid abandonment of this application, applicant must timely file one of the following replies: (1) an amendment, affidavit, or other evidence, which places the application in condition for allowance; (2) a Notice of Appeal (with appeal fee) in compliance with 37 CFR 41.31; or (3) a Request for Continued Examination (RCE) in compliance with 37 CFR 1.114. The reply must be filed within one of the following time periods:
   a) ☒ The period for reply expires 4 months from the mailing date of the final rejection.
   b) ☐ The period for reply expires on: (1) the mailing date of this Advisory Action, or (2) the date set forth in the final rejection, whichever is later. In no event, however, will the statutory period for reply expire later than SIX MONTHS from the mailing date of the final rejection.

   Examiner Note: If box 1 is checked, check either box (a) or (b). ONLY CHECK BOX (b) WHEN THE FIRST REPLY WAS FILED WITHIN TWO MONTHS OF THE FINAL REJECTION. See MPEP 706.07(f).

Extensions of time may be obtained under 37 CFR 1.136(a). The date on which the petition under 37 CFR 1.136(a) and the appropriate extension fee have been filed is the date for purposes of determining the period of extension and the corresponding amount of the fee. The appropriate extension fee under 37 CFR 1.17(a) is calculated from: (1) the expiration date of the shortened statutory period for reply originally set in the final Office action; or (2) as set forth in (b) above, if checked. Any reply received by the Office later than three months after the mailing date of the final rejection, even if timely filed, may reduce any earned patent term adjustment. See 37 CFR 1.704(b).

NOTICE OF APPEAL

2. ☐ The Notice of Appeal was filed on _____. A brief in compliance with 37 CFR 41.37 must be filed within two months of the date of filing the Notice of Appeal (37 CFR 41.37(a)), or any extension thereof (37 CFR 41.37(e)), to avoid dismissal of the appeal. Since a Notice of Appeal has been filed, any reply must be filed within the time period set forth in 37 CFR 41.37(a).

AMENDMENTS

3. ☒ The proposed amendment(s) filed after a final rejection, but prior to the date of filing a brief, will not be entered because
   (a) ☒ They raise new issues that would require further consideration and/or search (see NOTE below);
   (b) ☐ They raise the issue of new matter (see NOTE below);
   (c) ☒ They are not deemed to place the application in better form for appeal by materially reducing or simplifying the issues for appeal; and/or
   (d) ☒ They present additional claims without canceling a corresponding number of finally rejected claims.

   NOTE: _____. (See 37 CFR 1.116 and 41.33(a)).

4. ☐ The amendments are not in compliance with 37 CFR 1.121. See attached Notice of Non-Compliant Amendment (PTOL-324).
5. ☐ Applicant's reply has overcome the following rejection(s): _____.
6. ☐ Newly proposed or amended claim(s) _____ would be allowable if submitted in a separate, timely filed amendment canceling the non-allowable claim(s).
7. ☐ For purposes of appeal, the proposed amendment(s): a) ☐ will not be entered, or b) ☐ will be entered and an explanation of how the new or amended claims would be rejected is provided below or appended.

   The status of the claim(s) is (or will be) as follows:
   Claim(s) allowed: *None*.
   Claim(s) objected to: *None*.
   Claim(s) rejected: *188-195 and 198-201*.
   Claim(s) withdrawn from consideration: *1-17,19,23-37,39,43-58,60,64-72,74,78-85,87,91-117,122,125,126 and 128*.

AFFIDAVIT OR OTHER EVIDENCE

8. ☐ The affidavit or other evidence filed after a final action, but before or on the date of filing a Notice of Appeal will not be entered because applicant failed to provide a showing of good and sufficient reasons why the affidavit or other evidence is necessary and was not earlier presented. See 37 CFR 1.116(e).
9. ☐ The affidavit or other evidence filed after the date of filing a Notice of Appeal, but prior to the date of filing a brief, will not be entered because the affidavit or other evidence failed to overcome all rejections under appeal and/or appellant fails to provide a showing a good and sufficient reasons why it is necessary and was not earlier presented. See 37 CFR 41.33(d)(1).
10. ☐ The affidavit or other evidence is entered. An explanation of the status of the claims after entry is below or attached.

REQUEST FOR RECONSIDERATION/OTHER

11. ☒ The request for reconsideration has been considered but does NOT place the application in condition for allowance because: _____.
12. ☐ Note the attached Information Disclosure Statement(s). (PTO/SB/08 or PTO-1449) Paper No(s). _____
13. ☐ Other: _____.

LYNETTE R. F. SMITH
SUPERVISORY PATENT EXAMINER
TECHNOLOGY CENTER 1600

Claims 130, 132-135,138,139,146,147,153,155-157,159-162,164,172,179,180,182,183, 187 and 196-197 have been withdrawn.

The after final amendment raises new issues that would require further search and/or consideraton.The new issues are drawn to the method for determining a sequence wherein sequentiall identifying y raman spectroscopy involves analyzing raman data in which at leasr one spectral line represent a single nucleotide. Furthermore, the amendment presents new claim 202 without cancelling any of the finally rejected claims. Thus, the amendment will not be entered.

The rejection of claims 188-195 and 198-201 under 35 U.S.C. 102(b) as being anticipated by Vo-Dinh (US Patent 5,306,403) is maintained for reasons already of record. Applicants argue that Vo-Dinh uses known sequences while the instant method uses unknown sequences. However a recitation of the intended use of the claimed invention must result in a structural difference between the claimed invention and the prior art in order to patentably distinguish the claimed invention from the prior art. If the prior art structure is capable of performing the intended use, then it meets the claim. Furthermore, the claims do not limit the uses of known or unknown sequences, therefore the argument is not persaussive.

Applicants assert that Vo-Dinh uses fragments of 4 to 8 bases. However the instant claims recite fragmenting one or more bases, therefore the instant claims embrace fragments of 4 to 8 bases and there is no limitation on the size of the fragments. Therefore the art reads on the instant claims.

Applicants assert that it is unclear how raman spectroscopy is used by Vo-Dinh et al. However Vo-Dinh et al., clearly teach how the label is a specific chemical group tand can be detected using SERS spectrographic techniques. Vo-Dinh et al., teach that after separation of the DNA fragments, the SERS labels are detected by focusing a light source onto a surface of a SERS-active coating. Then a sequencer apparatus allows for sequential identification. The claims only require that the fragments are sequentially identified by raman spectroscopy and that the determination of the sequence is based on the identification. There is no requirement that only Raman Spectroscopy techniques be used. Furthermore, Vo-Dinh et al., teach raman-based SER(R)S analysis systems for DNA sequencing. Therefore, Vo-Dinh et al., clearly teach DNA sequence analysis, thus the rejection is maintained.

The rejection of claims 188-195, 198-199 and 201 under 35 U.S.C. 103(a) as being unpatentable over Dorre et al., in view of Kneipp et al., is maintained for reasons already of record.Applicants argue that there is no suggestion to combine the references. In response to applicant's argument, the examiner recognizes that obviousness can only be established by combining or modifying the teachings of the prior art to produce the claimed invention where there is some teaching, suggestion, or motivation to do so found either in the references themselves or in the knowledge generally available to one of ordinary skill in the art. In this case, it would have been prima facie obvious at the time of applicants invention to modify the method for determining a sequence of at least a portion of a DNA or an RNA as taught by Dorre et al., wherein the modification exchanges fluorescence detection for SERS detection as taught by Kneipp et al., because Kneipp et al., teaches that raman spectroscopy is complementary to fluorescence but offers additional beneficial properties.

Applicants' urge that hindsight reasoning was used to make the rejection. However, in response to applicant's argument that the examiner's conclusion of obviousness is based upon improper hindsight reasoning, it must be recognized that any judgment on obviousness is in a sense necessarily a reconstruction based upon hindsight reasoning. But so long as it takes into account only knowledge which was within the level of ordinary skill at the time the claimed invention was made, and does not include knowledge gleaned only from the applicant's disclosure, such a reconstruction is proper. In this case one of ordinary skill in the art would have a reasonable expectation of success in determining the sequencing method using raman spectroscopy instead of fluorescence since it provides a high degree of structural information about the molecule; requires shorter time for detection and avoids photodecomposition. Furthermore, no more than routine skill would have been required to exchange the detection methods when both methods are known to detect single molecules, and the art teaches that single molecule detection can identify DNA or RNA sequences using nuclease fragmentation and sequential identification and determination of the sequence. Therefore applicants' arguments are not persaussive and the rejection is maintained.